ABSTRACT OF DISCLOSURE

An LDPC decoding method and apparatus of LDPC decoding a codeword formed by c code bits transmitted through a channel include receiving the codeword and a p x c parity check matrix formed of 0 and 1 values, comparing the codeword with each of p rows of the parity check matrix, the rows formed with c elements, generating an R matrix by obtaining a first minimum value that is a minimum value among elements that are not 0 in each row, a second minimum value that is a second smallest value in the same row, and a location of the first minimum value, and outputting a decoded codeword formed by c code bits by determining one code bit by adding elements of each column of the R matrix.